National Institute of Environmental Health Sciences

Factors associated with morbidity during the 2003 heat wave in two population-based cohorts of elderly subjects: PAQUID and Three City

Author(s): Larrieu S, Carcaillon L, Lefranc A, Helmer C, Dartigues JF, Tavernier B, Ledrans M, Filleul L

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Abstract:

INTRODUCTION: France was affected in early August 2003 by a heat wave with an exceptional health impact. Many studies on mortality were conducted but few data are available on morbidity. The objectives of this study were to describe the impact of the 2003 heat wave in the general population of elderly people and to determine individual factors associated with morbidity. METHODS: A cross-sectional study nested in two prospective cohorts, the PAQUID and the Three-City (3C) studies, was performed. The sample included 2295 subjects from the general population, aged 67 and over who were interviewed by a phone questionnaire to complete data available in the database of the two cohorts. Two variables assessing morbidity (felt by the person and objectively observed) were created. Relationship between morbidity and individual factors were explored in univariate analyses; then multiple logistic regressions were conducted. RESULTS: During the heat wave, 8.8% of the subjects felt a deterioration of their health, and 7.8% declared an objective morbid outcome. In the univariate analyses, many factors were associated with morbidity. After multiple adjustments, few associations were still observed but some factors were associated with a decreased risk (presence of a bathroom, dressing lighter than usually) or an increased risk (stopping usual activities, presence of chronic diseases). CONCLUSION: This study showed a non-negligible impact of the 2003 heat wave in term of felt and objective morbidity. Several individual factors were shown to be associated with morbidity and should be taken into account for the elaboration of prevention plans.

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Resource Description

Exposure : ☑

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat

Geographic Feature: ☑

resource focuses on specific type of geography

Urban

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : France

Health Impact:

specification of health effect or disease related to climate change exposure

Morbidity/Mortality

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Elderly, Low Socioeconomic Status

Other Vulnerable Population: women; people with chronic disease

Resource Type:

format or standard characteristic of resource

Research Article

Resilience:

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content